

In The Claims:

Amend claims 16, 19, 22 and 24, and add new claims 26-27, as follows:

Claims 1-15 (canceled).

Claim 16 (currently amended)

16. An offshore fluid transfer system which includes a fluid-passing seafloor structure such as one connected to a seafloor well or pipeline, a compliantly anchored floating structure such as a vessel, at least one mooring line that is anchored to the seafloor and that holds said floating structure in the vicinity of said seafloor structure and at an initial position in a calm environment, and a fluid-carrying conduit structure that extends up from said seafloor structure to said floating structure, wherein:

said conduit structure includes a single rigid seafloor riser support that has a lower portion lying at the seafloor and fixed in position and orientation to the sea floor, said riser support also has an upper portion lying at a height of a plurality of meters above the seafloor but less than the height of the sea so the upper portion of the support lies in the sea;

said conduit structure also includes a supported pipe that extends along a plurality of meters of the height of said riser support and that is fixed to said riser support at a plurality of locations that are vertically spaced apart by a plurality of meters, and said conduit structure includes a flexible conduit portion that extends from said seafloor riser support to said floating structure;

~~said riser support has sufficient average horizontal width and length dimensions compared to its height, that said riser supports the conduit structure without an underwater buoy to pull up the top of the riser support.~~

Claim 17 (original)

17. The system described in claim 16 including:

a curved rigid pipe section (80) that has first and second ends and that is

5 curved by more than 45° between said ends, said curved rigid pipe section fixed to said riser support at a top of said riser support, said first end of said curved rigid pipe section being connected to an upper end of said supported pipe, and said second end of said curved rigid pipe section being connected to an end of said flexible conduit portion.

Claim 18 (original)

18. The system described in claim 16 wherein:
said supported pipe is straight and rigid.

Claim 19 (currently amended)

5 19. The system described in claim 16 wherein:
said supported pipe extends in a fixed orientation relative to the sea floor at a forward upward incline to the top portion of said riser support, and said flexible conduit portion extends at a forward-downward incline from the top portion of said riser support.

Claim 20 (canceled)

Claim 21 (original)

5 21. The system described in claim 16 wherein:
said rigid frame has a longitudinal (M) length and a lateral (L) width, and said transfer system includes a plurality of supported rigid pipe lengths, including said supported pipe, which are laterally (L) spaced apart and that each extends along a plurality of meter of height of said riser support.

Claim 22 (currently amended)

22. An offshore fluid transfer system that lies in a sea for transferring fluid between a fluid-carrying seafloor structure that lies at the seafloor and a floating structure that floats at the sea surface and that is compliantly anchored

5 to remain in the vicinity of the seafloor structure, the system including a conduit comprising a flexible conduit member that extends along much of the sea depth, said conduit having upper and lower ends coupled respectively to said floating structure and to said seafloor structure, comprising:

10 a rigid frame having a lower end fixed in orientation to the seafloor and an upper portion extending above the seafloor by a plurality of meters and lying below the sea surface; and wherein

said conduit has a rigid lower portion of a length of a plurality of meters that is fixed to said rigid frame, and that extends along said frame along a height of a plurality of meters, said conduit lower portion being connected in series with said flexible conduit member;

15 ~~said riser support being sufficiently rigid and strong to support itself without an underwater buoy at its top.~~

Claim 23 (original)

23. The system described in claim 22 wherein:

said conduit includes a rigid pipe that extends in a curve of at least 45° and that has first and second opposite ends with said first end connected to the upper end of said conduit rigid lower portion and with said second end
5 connected to an end of said flexible conduit member.

Claim 24 (currently amended)

24. An offshore fluid transfer system that lies in a sea for transferring fluid between a fluid-carrying seafloor structure that lies at the seafloor and a floating structure that floats at the sea surface and that is compliantly anchored to remain in the vicinity of the seafloor structure, the system including a conduit
5 comprising a flexible conduit member that extends along much of the sea depth, said conduit having ends coupled respectively to said floating structure and to said seafloor structure, comprising:

a rigid riser support having a lower end fixed in orientation to the seafloor

and an upper portion extending above the seafloor by a plurality of meters and
lying below the sea surface; and wherein

said conduit has a lower portion of a length of plurality of meters that is
fixed to said riser support at locations that are vertically spaced by a plurality of
meters, said conduit lower portion extends at a forward-upward incline to said
upper portion of said riser support, said flexible conduit portion extending at a
forward-downward incline from the top portion of said riser support;

~~said riser support being sufficiently rigid and strong to support itself
without requiring an underwater buoy at its top.~~

Claim 25 (original)

25. An offshore fluid transfer system which includes a fluid-passing
seafloor structure such as one connected to a seafloor well or pipeline, a
compliantly anchored floating structure such as a vessel, at least one mooring
line that is anchored to the seafloor and that holds said floating structure in the
vicinity of said seafloor structure and at an initial position in a calm
environment, and a fluid-carrying conduit structure that extends up from said
seafloor structure to said floating structure, wherein:

said conduit structure includes a single rigid seafloor riser support that
has a lower portion lying at the seafloor and an upper portion lying at a height
of a plurality of meters above the seafloor;

said conduit structure also includes a supported pipe that extends along
a plurality of meters of the height of said riser support and that is fixed to said
riser support at a plurality of locations that are vertically spaced apart by a
plurality of meters, and said conduit structure includes a flexible conduit portion
that extends from said seafloor riser support to said floating structure;

said seafloor riser support upper portion forms a convexly rounded hose-
supporting top surface that has a radius of curvature of a plurality of meters,
and said conduit flexible portion includes a part that extends around said top
surface and that can lift off said top surface and lay back down on said top

20 surface.

Claim 26 (new)

26. An offshore fluid transfer system which includes a fluid-passing seafloor structure such as one connected to a seafloor well or pipeline, a compliantly anchored floating structure such as a vessel, at least one mooring line that is anchored to the seafloor and that holds said floating structure in the vicinity of said seafloor structure and at an initial position in a calm environment, and a fluid-carrying conduit structure that extends up from said seafloor structure to said floating structure, wherein:

said conduit structure includes a single rigid seafloor riser support that has a lower portion lying at the seafloor and an upper portion lying at a height of a plurality of meters above the seafloor but less than the height of the sea so the upper portion of the support lies in the sea;

said conduit structure also includes a supported pipe that extends along a plurality of meters of the height of said riser support and that is fixed to said riser support at a plurality of locations that are vertically spaced apart by a plurality of meters, and said conduit structure includes a flexible conduit portion that extends from said seafloor riser support to said floating structure;

said riser support has sufficient average horizontal width and length dimensions compared to its height, that said riser supports the conduit structure without an underwater buoy to pull up the top of the riser support;

said supported pipe extends at a forward upward incline to the top portion of said riser support, and said flexible conduit portion extends at a forward-downward incline from the top portion of said riser support.

Claim 27 (new)

27. An offshore fluid transfer system that lies in a sea for transferring fluid between a fluid-carrying seafloor structure that lies at the seafloor and a floating structure that floats at the sea surface and that is compliantly anchored

5 to remain in the vicinity of the seafloor structure, the system including a conduit comprising a flexible conduit member that extends along much of the sea depth, said conduit having upper and lower ends coupled respectively to said floating structure and to said seafloor structure, comprising:

10 a rigid frame having a lower end fixed to the seafloor and an upper portion extending above the seafloor by a plurality of meters and lying below the sea surface; and wherein

said conduit has a rigid lower portion of a length of a plurality of meters that is fixed to said rigid frame, and that extends along said frame along a height of a plurality of meters, said conduit lower portion being connected in series with said flexible conduit member;

15 said riser support being sufficiently rigid and strong to support itself without an underwater buoy at its top.

20 said conduit includes a rigid pipe that extends in a curve of at least 45° and that has first and second opposite ends with said first end connected to the upper end of said conduit rigid lower portion and with said second end connected to an end of said flexible conduit member.